DEVOTED TO AGRICULTURE AND ALL ITS VARIOUS KINDRED ARTS AND SCIENCES

Honor waits, o'er all the earth, The art that calls her harvests forth.—BRYANT.

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S. W. COLE, EDITOR. QUINCY HALL, BOSTON. J. NOURSE, PROPRIETOR.

PEARMAINS — PIPPINS.

PEARMAINS. — According to an article in the English Gardener's Chronicle, the original signification of *pearmain*, when applied to an apple, was pear-shaped. This meaning seems to have been lost. In our boyhood, we found that this name was given to apples that had a pear flavor, and we believe this has generally been considered the meaning of the word in this country. But of late years, this term has been applied to many apples that do not resemble pears either in form or flavor.

PIPPIN originally signified a kernel of the seed of apples, pears, and quinces; but early authors applied it to seedling or natural trees, in contradistinction to grafted or budded trees, as appears from the following from Mascal: "As often as pepin-trees be removed to a better grounde, the fruite thereof be so much amended; but the fruite which doth come of graffing doth always kepe the forme and nature of the tree whereof he is taken."

According to the manner of using the word *pippin*, by many in the present day, it means nothing more nor less than apple, though some, in applying it to natural or seedling trees, continue its use for the same purpose as the early authors on pomology. and it would be well if this ancient signification could be continued, to prevent the too frequent use of the word *seedling*, which is filling our fruit catalogues from the multiplicity of new fruits designated by the originator's name attached to this term. Its application to a seedling tree is in accordance with its original meaning, — a seed.

NEW YORK STATE FAIR.

This grand exhibition will be held at Syracuse, September 11, 12, and 13. The premiums offered are liberal, and the list very extensive, filling nearly five columns of the Albany Evening Journal, amounting, as some have estimated, to six or seven thousand dollars. As the affairs of the New York State Agricultural Society have been conducted on so liberal a plan, and competition invited from different parts of the Union and from the Canadas, this society assumes the character of a national association, and the fair seems like a great national jubilee.

An address is expected by Professor Johnston, of England, who is distinguished for his works and lectures on agriculture and science. President Taylor has accepted an invitation to be present at the coming fair, and it will doubtless be the greatest exhibition, both in the show and the concourse of people, that has ever occurred in this country.

The railroad companies in the state of New York offer unusual facilities to persons attending the state fair, and for the transportation of animals and other articles for exhibition. When shall we witness so liberal a course in New England?

MARL.

Marls are composed of carbonate of lime, with various kinds of earth or loam. They are known by their effervescence on the application of acids, which drives off the carbonic acid gas. In New Jersey marls abound, and they have been used with astonishing success in renovating the worn-out sandy lands. In New England, but very little attention has been paid to this subject, though marl beds are found in many parts, and thousands of farmers have this valuable fertilizer upon their own premises, who are not aware that they possess so valuable a treasure.

Marl is useful on all soils, excepting such as already abound in lime. We hope that farmers will examine into the resources which they have on their own farms, as they will often find at hand the means of their renovation and improvement. We copy the following article from a prize essay on "Renovating Worn-Out Lands," by Edward Stabler, of Sandy Spring, Md., for the American Farmer: —

MARL. — I can say but little from experience in the use of calcareous manures; but am fully satisfied, both by information derived from others and from personal observation, that wherever it abounds, it might be made a mine of wealth to the proprietor, and the adjacent districts which admit of water transportation.

The only apparent reason why they are not more so, is either ignorance of its great fertilizing properties, or a lack of the necessary enterprise and indus-

try to become rich, when every facility for the purpose is, as it were, laid at their very doors. The quantity of marl required to the acre, to produce much beneficial result, does not admit of extended land transportation; but there are thousands, if not tens of thousands, of acres bordering on and near tide water, both in this and neighboring states, now thrown out as waste lands, because they will no longer yield even a stinted growth of vegetation; most, if not all, of which might readily be reclaimed by the judicious use of marl, and at one fourth the cost per acre that lands in the interior — originally no better, if so good — are made to yield ten to twelve barrels of corn, or thirty to forty bushels of wheat, to the acre. I have been informed by some of the large landed proprietors — not owning nor residing within less than eight to ten miles of the marl beds — that a boat load of a thousand to twelve hundred bushels of marl, rich in carbonate of lime, could be delivered at many of their landings, at an expense not exceeding eight to ten dollars. Yet not one bushel was ever used!

But, as was justly remarked by one of these very intelligent and hospitable gentlemen, "It's no use to preach to a *deaf* congregation;" and a further remark or two will only be added, not altogether without the hope that something will eventually "stir them up," and induce a trial, at least, of this valuable manure. It matters less how, when, or what quantity of marl or lime is applied; only make the application, and that pretty liberally. Its application, like lime, is best made one, two, or three years, and on the surface, before breaking up the land, and thus give it the benefit of the winter's frosts and snows to dissolve and incorporate it with the soil.

STRAWBERRIES.

Mr. Editor: Please inform me of the best strawberry, to be sure of a good crop, and the best time to set them out? A SUBSCRIBER.

Answer. — The best strawberry, for New England, if the cultivator has but one kind, is the Early Virginia, called in the Middle States *Large Early*. It is hardy, a vigorous grower, very productive, and excellent fruit. This has been long and extensively tried. There are some new kinds of high pretensions, but they have not yet been fully tested. We can give examples, from good authorities, of the largest crop from this strawberry that was ever known.

In cultivating two kinds, we should add Hovey's Seedling; and from its large size, which makes it more salable, and more convenient to pick, some cultivators give this a preference over the Early Virginia. But as it is a pistillate plant, it will not yield much alone, and the Early Virginia is a good kind to plant near it, for the purpose of fertilizing it with its pollen or dust, and producing an earlier crop, it being about a week earlier than Hovey's. These two kinds form a succession of crops, and are the most valuable that have been fully tested in this part of the country.

In setting the two kinds, set every fifth or sixth plant of the Early Virginia, and let the Early Virginia in one row come between the same kind in adjacent rows. Thus, h for Hovey, v for Virginia.

v h h h h h v h h h h h v h h h h h v

h h h v h h h h h v h h h h h v h h h

v h h h h h v h h h h h v h h h h h v

Or set single or double rows four feet apart, and set every second row of each kind; or, if you would have more of Hovey's, set two rows of them and one of Early Virginia.

The best time to set strawberries is in the spring, and then they should be set in rows four feet apart, and vigorous kinds, like Early Virginia, should be set about a foot apart, and those of moderate growth, like Hovey's, about eight or ten inches apart, in the row.

Strawberry plants are often set in August, or the last of July, frequently on land that has been cleared of early crops, and in a wet season they succeed well; but if it is dry and hot, they often fail; or if the plants set do not fail, they fail to send out runners, and there is no crop excepting from the plants set out. Therefore the surest way, in setting the latter part of summer, is to set double rows for every four feet, having the two rows about fifteen inches apart, and set the plants nearly twice as thick as in spring planting; then, if there be no new plants made, owing to drought, or other cause, the old plants may be sufficiently numerous for a good crop.

The plants set late in July, or in August, generally yield a good crop the next season; but it is very uncertain about getting a good product from new plants that are made from them, or rather uncertain about their sending out new plants, especially on dry ground. Moist land is much better adapted to late setting. The surest way is to set in spring, and then, from a few plants set, the ground is generally well covered with vines, and a good crop produced the next season.

HEREFORD CATTLE.

In our last number, p. 250, is an interesting article on this race. We learn from the advertisement of Messrs. Bingham, in our advertising department, that they have this stock for sale, and are making experiments with it in New England. We are pleased that a race of animals, so famous in the old country, is now subjected to a fair trial, by the enterprising and intelligent in our own section of the Union.

In the numerous attempts to improve the breeds of cattle, the noble Herefords have been too much neglected. Some think that they are too large, and require too high keeping for our short pastures; but we would inquire where larger oxen can be found than many that are used in the lumber business in Maine. And these noble animals have been raised there, and they are preferred in most cases to lighter cattle.

If large native cattle may be raised and used to advantage in our northern region, then why may not superior foreign breeds, of a large size, do well? And may they not be used to good advantage in crossing with our common cattle, for which purpose the Messrs. Bingham say the Herefords are well adapted?

We do not recommend to the farmer, in common circumstances, to run into numerous experiments; but let the enterprising, who are well able, lead off

in this business, and let others contribute their mite towards making a fair trial of all and any animals that promise a liberal compensation for expenditures. We trust that the Herefords will be scattered over different sections of New England, and fairly tested.

WITCH OR COUCH GRASS.

This grass, in tillage, is among the most troublesome of all plants or weeds. The most effectual way to destroy it, where it is extensive, is to let the land lie fallow, and plough and harrow it often, especially in dry weather. The plough will check its growth, when used often, and bring the roots to the surface, and the harrow will draw them out, and they will die when exposed to a hot sun, in a dry time. When this grass first makes its appearance in tillage, it should be thoroughly eradicated. We copy the following remarks from the Germantown Telegraph: —

Witch grass commonly abounds in all lands which have been long under the plough, and rendered fine and pulverulent by a rapid succession of weeded crops, and liberal applications of fructifying manures. Many methods have been advised and recommended for its extirpation, but none as yet which can be relied on as wholly efficient. Where a small spot is to be cleansed, resting during one season, carefully covering the surface with boards, will generally destroy most of the grass. A writer in the Maine Farmer, some years since, stated that he had succeeded in eradicating it by ploughing it under "a foot deep," afterward harrowing it carefully and "cultivating the ground as usual; it never troubled him afterward." Others have tried this "plan," but have failed to realize the result anticipated; the grass, even when embedded in the soil to the depth of a foot, still retained its vitality, and came up to the surface late in the season in "different parts of the field, as rank and vigorous as before." Some have recommended sowing this grass, as it makes a rich and nutritive food for stock; but no one, who understands its habits, will concur in urging this plan, as it is not only a great exhauster, but after the first or second year produces but a small crop, unless heavily top-dressed. B.

Bensalem, *June* 20, 1849.

THE MOUNT VERNON FARMER.

Washington was ardently attached to agriculture, and its improvement was ever with him an object of permanent regard. Virginia can boast of few sons to whose efforts her agriculture has been more signally indebted; few who have assisted in promoting its interests to a greater extent, or with the manifestation of more ardent and patronizing zeal.

The following account of his farming operations will serve to exhibit the "*Father of his Country*" — the man "first in war, first in peace, and first in the hearts of his countrymen" — in his true light. The farm of General Washington, at Mount Vernon, consisted of ten thousand acres of land, in one body — equal to about fifteen square miles. It was divided into farms of convenient size, at the distance of two, three, four, and five miles from the mansion house. These farms he visited every day, in pleasant weather, and was constantly engaged in making experiments, with a view to the improvement of agriculture. Some idea of the extent of his farming operations may be formed from the following facts: In 1787, he had five hundred acres in grass, sowed six hundred bushels of oats, seven hundred acres with wheat, and prepared as much more for corn, barley, potatoes, peas, beans, &c., and had sowed one hundred and fifty with turnips. His stock consisted of one hundred and forty horses, one hundred and twelve cows, two hundred and thirty-five working oxen, heifers, and steers, and five hundred sheep.

He constantly employed two hundred and fifty hands, and kept twenty-four ploughs going during the whole year, when the state of the weather and soil would permit. In 1786, he slaughtered one hundred and fifty hogs, weighing eighteen thousand five hundred and sixty pounds, for the use of his family, beside provisions for his negroes.

LOWER-MERION.

June 30, 1849.
— *Germantown Telegraph.*

For the New England Farmer.

TAKE CARE OF YOUR HORSES.

Mr. Editor: Horses should never be allowed to stand in the stable with their harness on, especially when they have been heated by hard driving, and consequently are in a high state of perspiration. A horse should be divested of his harness as soon as he is led to his stall for his feed. A man can judge from his own feelings how much more comfortable a horse must feel when entirely unburdened. Who has not experienced the contrast on his own person, after having walked a mile or two in a warm day, with a coat on, when divesting himself of it, and vest even? How much more comfortable a person will feel when thus unencumbered, than he will if he suffers himself to sit down with the same quantity of clothes on he had been travelling in! So with the horse; he will feed more readily, and will be less liable to be fretted by the harness.

A horse that has been galled or chafed by any part of the harness, (which is quite often the case in warm weather,) should have the harness removed as soon as possible, to prevent irritation. The horse is an animal that should be carefully watched by his master or keeper, to see that he is always in a proper condition to work. How often have I seen the noble horse hauling heavy loads, when his shoulders and sides were badly lacerated by the galling of the harness! And not unfrequently have I seen the lash applied to the willing animal, because he refused to draw — all in consequence of sores on the shoulders or other parts of the body.

None but an unmerciful man would beat his horse when in this condition. When horses have become fretted by the harness, timely aid and the proper remedies should be applied. A horse should be used as little as possible when he has a galled shoulder. But if he must of necessity be used, bandages should be fitted around the collar, both above and below the wound, that the collar may not irritate it. A few days (if the proper remedies are used) need only elapse before a cure may be effected. There are different remedies that will prove effectual, providing the galled parts can be kept from being chafed, from day to day. I have had good success by washing the parts affected in nothing but cold water. Different individuals, however, have different remedies. "A merciful man will be merciful to his beast;" and he who cannot be merciful to his beast, ought not to be the owner of one.

A. TODD.

Smithfield, R. I., *July*, 1849.

Forests of standing trees in Yorkshire, England, and in Ireland, have been discovered embedded in stone.

For the New England Farmer.

INSECTS AND TOADS.

Mr. Editor: We suppose it to be a fact, well established by the experience of the horticulturists of England, that the higher and more extended the state of cultivation, the greater will be the number of insects and weeds, with which we shall have to contend. And it will probably be found, as we continue to increase, in number and variety, our trees, shrubs, and plants, brought, as they are, from distant parts of the globe, that we have also introduced with them new weeds and new insects.

And, if we add to those brought from abroad our own native species, which leave our fields and woods, to follow the trees, shrubs, and plants, brought from thence, and transplanted in our extensive gardens, it must at once be seen, that the cultivator has an increasing host of weeds and insects, disputing with him, day by day, his right to the productions of the soil, and even the right of occupancy of the soil itself. The necessity of this constant warfare upon weeds and insects compels us to look around for aid and assistance. And where shall we find it? I think we may find some aid by the protecting of our birds, particularly our insectivorous ones, and by never permitting a lubberly boy to enter our grounds, to shoot them or disturb their nests. In regard to the keeping of hens in a garden, to destroy insects, we would not recommend it, as we have, after many trials, with the single exception of the Bantam breed, found them to be very troublesome. I think much aid may be found by giving protection to, and increasing the number of, such reptiles as are known to be harmless, and feed upon insects. And, in this connection, permit me to mention, and introduce to your notice, regard, and kind care, such innocent creatures as green snakes, striped snakes, and our common toad, which spend their best days and nights in ridding our fields and gardens of our greatest pests, and harming no one. But, O! the cruel prejudice against them, by those ignorant persons who suppose that all snakes have fangs to bite them, and because the toad, in their opinion, is ugly in its appearance, it must consequently be venomous; forgetting that its eyes are proverbially beautiful, having a brilliant, reddish, gold-colored iris surrounding the dark pupil. Hence Shakspeare, in Romeo and Juliet, remarks,—

"Some say the lark and loathed toad change eyes."

We know of a skilful cultivator of the soil, in the old county of Essex, who thinks it worth his while, in view of the large number of insects destroyed by toads, to pay boys half a cent apiece, for all they will put into his garden. It is astonishing what a number of insects toads in a garden will destroy, and how excessively fat and corpulent they will become from this excess of food. Their love of those great pests, rose-bugs, is very great.

We have of late been in the habit of shaking our plum-trees, to dislodge these insects, just at night, for the benefit of the toads, as well as of the trees, when they would at once gather around to seek their favorite food. We have generally found them, early in the morning, under the trees infested with rose-bugs, watching and waiting for the fall of their prey, when, by giving the trees a good shake, they were plentifully supplied. When thus shaken from the trees early in the morning, or late in the afternoon, they never take wing, but remain upon the ground, to be devoured by these reptiles. Now, Mr. Editor, you and I have lived long enough in this world to know that the value of any thing depends very much upon its permanency, not even excepting the services rendered by toads. And now, having learned their value to us as cultivators of the soil, how can we best secure them for our permanent benefit? Owing to habits and instincts peculiar to the race, the same toad, that is so useful to me this summer in my garden, may, another season, be located afar off in a wet meadow, or low marsh, where his services are not so much needed. So the question resolves itself into this — When we get a toad that is steady and useful in our garden, how can we keep him there? To answer this question, I suppose we must first learn his habits and mode of life. These reptiles, in common with many others, upon the approach of cold weather in autumn, usually seek winter quarters in the muddy bottoms of ponds, unless they can find, to their liking, protection from the cold and frost of winter, near at hand. This they frequently do by crawling into and burrowing in some old hotbed, or loose, dry soil under the roots of trees. We have noticed, that they are fond of hibernating in old rotten hemlock tan, sometimes used in gardens to form walks. Late in the autumn of 1847, in removing a tree, whose roots ran into one of these tan walks, we disturbed, in a partially torpid state, large numbers of toads, which were counted by my man and carefully put back again, and found to number seventy-nine. They appeared to extend through the entire walk of several rods in length. This circumstance has led me to believe, that we might not only fill our gardens with this — may I not say useful? (certainly so to the gardener) — reptile, but retain him for years. Toads, in the summer season, should be afforded protection in our gardens, by placing boards for them on the ground, raised an inch from the surface, under which to hide, and screen themselves from the sun.

S. J. FOWLER.

Danvers, New Mills, *July* 14, 1849.

Editorial Remarks. — The value of toads has not generally been duly considered by cultivators. They feed on insects, are very voracious, and remarkably adroit in catching their prey. They eat no fruit, and destroy no vegetables. Being thus harmless, and admirably adapted to the destruction of insects, they should be classed among the most useful of animals.

The great increase of insects, particularly on old lands, and the immense destruction of crops by their depredations, require every possible exertion by the farmer to lessen their number; and more attention must be given to this subject, or some tender plants and fruits must be abandoned as unprofitable.

For the New England Farmer.

INSECTS ON POTATOES.

Mr. Editor: I venture a brief contribution to your pages, which may add some information, perhaps, as to facts which I have observed in the growth of potatoes, and which probably have not attracted much attention. The healthful growth of the stalks and leaves of this vegetable must be necessary to the healthful setting and growth of its tubers, according to a common law of vegetation. Consequently whatever impedes the growth of the former, renders them diseased, or prevents their arriving at maturity, must be injurious to the latter. If large, spreading, vigorous tops form full blows, followed by the growth of potato balls, and the stalks and leaves continue their growth unimpeded sufficiently long to attain full expansion and maturity, then sound, healthy, full-grown tubers will be the result.

I have therefore diligently watched for every symptom of decay and disease in the potato vine. This plant is the favorite food of various insects. First comes the small black flea, in multitudes, and

commences perforating the leaves with innumerable holes as soon as they appear. The vivacious power of the plant surmounts the attacks of these petty marauders, and holds on its way, in spite of the insect's habitual and continued depredations. Young cabbage plants, however, have not strength to withstand them, but to a great extent die. As the time approaches for potatoes to put forth blossoms, then the yellow striped bug, leaving, in part, the cucumber, melon, and squash, commences depositing clusters of yellow eggs in various places upon the potato leaves.

These hatch out in successive groups, and the insects attach themselves to the under side of the leaf, and devour in succession leaf after leaf, or sometimes appear dispersed singly. They are great devourers, and when the grubs have grown to maturity, they seek some other resort, probably the earth. Such were their ravages last year, that I passed among my Mercers, in my garden, frequently to destroy them with thumb and finger, having found them unhurt by dipping them into brine, tobacco juice, and lye.

Another insect, a peculiar fly, stings the leaves at the apex of the stalk, and they at once wilt and die; and generally, where I witness this, the stalk stops growing, and early decay ensues. Nothing but a sufficient number and activity of these flies can be necessary for the sure destruction of whole fields. The borer often perforates a stalk, and eating up and down its centre destroys it. The same worm, in like manner, infests corn, both when young and when considerably advanced. I have found currant branches likewise killed by this insect, by his eating into the top and proceeding down the centre of the branch, manufacturing it into a tube.

Present observation of the garden plat I cultivate convinces me of two things: first, that the fore-named bug and its larvæ, and the poisonous fly, are now doing much and irreparable injury to my potato plants by producing the decay and death of leaves; and secondly, that the stalks are likewise rendered sickly, and preparing to shed their leaves, or to retain them in a dry, black, crisped state — the sure precursor of immature diseased tubers. The evidence is satisfactory to myself, that so far as my own ground is concerned, there are causes at work, viz., these pestiferous insects — whose blighting power is quite adequate to produce the potato rot. My reasons are, that the blossoming of the plants and their natural growth are prevented, and that the tubers must be correspondently affected. They cannot live, grow, and come to maturity, because the vines are prevented from doing so.

At the same time, the juice imbibed from the earth, by the tubers, is prevented by the disease of the vines from being assimilated, and from having its superfluous part conveyed off. Consequently it is retained in the tubers, there to turn into a putrescent state, and thus at length completely to destroy them.

What would become of the fruit upon a tree, if insects should consume or infest, at a critical period of growth, the leaves and tender shoots around it? What would be the fate of an ear of maize, if, just when its silk is expanding, the leaves and stalk above it should be smitten with sudden, sure, and rapid decay, and a lingering death? And if, precisely at that crisis when the potato plant is preparing to blossom under the hot sun of June or July, the attacks of such insects are discovered, as consume and stunt the tenderest part of the plant, causing the sure, successive decay and death of the remainder, how is the conclusion to be resisted, that just to the extent to which these causes operate, there must ensue, by the righteous but mysterious visitations of Providence, the blight and destruction of the potato crop? How utterly impotent, too, is man to avert the calamity!

J. LEE.

Salisbury, Ct., *July* 11, 1849.

For the New England Farmer.

THE COMPOST HEAP.

Mr. Cole: We have noticed, in all our excursions during the summer, that farmers are taking unusual care to increase their manure heaps. The general course that has been pursued, was, immediately after planting, to cast the surplus manure from the yard, and such quantities of muck from the swamp as convenience permitted, and blend them in a common heap. This is undoubtedly a wise course, and will go to increase the productiveness of the land in a remunerative ratio. A question, however, will arise, whether an actual loss will not be realized by the farmer beyond what he might necessarily sustain by preparing the compost in the yard where the action of rains would tend to more thorough and uniform blending, and the trampling of animals be productive of good effect. At any rate, we should suppose that when manure is hauled to the field in May and June, when the warm season is just commencing, and when, of course, decomposition is going rapidly forward, and the gases in rapid action, a benefit would be found in putting a thick covering of muck over the heap, in order to arrest the volatile parts in their hurry to escape, and convert them into available stock. Let those who practise carting out manure thus early try a small heap in the last-mentioned way by the side of one formed in the usual method of letting things remain as they happen to fall, and notice the result in such case, and the truth as to which system is best, and the one which operates most favorably is the one to pursue.

But, after all, we would advise no farmer to neglect making use of his farm-yard for composting. Scrape it as clean as you can, and every rain will bring up muck, which, if properly saved, will go to increase the fertility of some patch which is beginning to show the features of a desert. Muck and turf are good retainers of water, and all perishable substances may be thrown in to increase the quantity. By gathering up fragments in this way, and blending them in a common mass, almost every farmer may collect enough, from June to October, to thoroughly dress an acre of land, and thereby increase its product fourfold, which is certainly better than to add two or three acres of land of ordinary quality to his premises, at the cost of cash which may be otherwise invested; and the increase of taxes, cost of keeping up fences, and all the et ceteras attendant on the increase of premises.

Yours truly,

W. B.

July, 1849.

SIGNS OF THE VIGOR, MATURITY, AND DECAY IN TREES.

Signs announcing the Vigor of a Tree. — The branches, especially towards the top, are vigorous; the annual shoots strong and long; the leaves green, vigorous, and thick, principally at the summit, and falling late in autumn; the bark is clear, fine, united, and nearly of the same color from the foot to the large branches. If at the bottom of the veins, or divisions of the thick bark, there appear smaller divisions, which follow from below upwards, in the direction of the fibres, and live bark be observed at the bottom of these divisions, it is an indication that the tree is very vigorous, and rapidly increasing in size. If some of

the lower branches, stifled by others, are yellow, languishing, and even dead, this is an accidental effect, and is no proof of the languor of the tree. Finally, it is a sign of vigor when branches are seen at the summit of the tree, rising above the others, and being much longer; but it is to be observed, that all trees with round heads do not throw out branches with equal force.

Signs which indicate that the Tree is mature. — Generally the head of the tree is rounded; the shoots diminish in length each year, and the farthest shoots add to the length of the branches only by the length of the bud; and the leaves are put forth only in the spring, and become yellow in the autumn before those of vigorous trees, and at this time the lower leaves are greener than the upper. The branches incline towards the horizon, and form angles sometimes of sixty or seventy degrees. These apparent signs, and the thinness of the layer deposited by the sap, indicate that the tree makes but small additions to itself, and now it should be cut down. The nature of the soil should be examined, as well as the kind of tree, to enable a judgment whether the tree should be left to increase still further, or whether it will be more proper to fell it. An exact age cannot be assigned for each species; but it has been observed that an elm, situated in an insulated plantation, may be felled with advantage, when between seventy and eighty years of age.

Signs of Decay in a Tree. — When a tree becomes crowned, (that is, when the upper branches die,) it infallibly indicates, especially for isolated trees, that the central wood is undergoing alteration, and the tree passing to decay. When the bark separates from the wood, or when it is divided by separations which pass across it, the tree is in a considerable state of degradation. When the bark is loaded with moss, lichens, or fungi, or is marked with black or red spots, these signs of alteration in the bark justify the suspicions of alteration in the wood within. When sap is seen to flow from clefts in the bark, it is a sign that the trees will soon die. As to wounds or gutterings, these defects may arise from local causes, and are not necessarily the results of old age. — *Loudon's Mag.*

TURNING IN GREEN CROPS.

To increase continually the fertility of our arable lands, should ever be regarded by the farmer as an object of the greatest consequence. By adopting improved systems of husbandry, and taking care to manure highly, or, in other words, to return somewhat more to the soil than is extracted by the crop, — this is a task of comparatively easy accomplishment, and the farmer who carefully practises upon this principle, will find that while he has actually larger and better crops, his fields are also, at the same time, becoming richer in the principles essential to a healthy vegetation, and to vegetable life. One of the most judicious and economical methods of enriching emasculated or worn-out fields, is to turn in green crops — not carelessly, and without reference to the character of the vegetable matter turned under, but with judgment and discrimination. The nature of the soil should be considered, and the adaptedness of the crop to supply its deficiencies critically examined — a matter requiring skill, and a good degree of practical experience to render it efficient, and productive of the end desired.

The following extract from Dr. Dana's Muck Manual contains some important suggestions in relation to this matter; and I therefore present it, hoping that every reader of the Telegraph will carefully ponder its truth, and, if a farmer, apply them daily in his practice: —

"Turning in green crops," says Dr. Dana, "is only returning to the soil the salts, silicates and *geine*, which the plant had drawn from it, together with all the organic matter the plant itself has elaborated from oxygen and hydrogen, carbon and nitrogen, from whatever source derived. It has decomposed, during the short period of its growth, more silicates and salts than the air ever could effect during the same period, which, being turned in, restore to the soil from which they grew, salts and silicates in a new form, whose action on vegetation is like that of alkalies. But powerful as is the action of green crops turned in, it is the experience of some practical men, that one crop allowed to perfect itself, and then die where it grew, and then turned in dry, is superior to three turned in green. The whole result is explained by the fact that dry plants give more geine than green. Green plants ferment — dry plants decay. A large portion escapes in fermentation as gas; and more volatile products are formed than during decay. The one is a quick consuming fire, the other a slow, smouldering ember, giving off during all its process, gases which feed plants and decompose the silicates of the soil."

Every practical agriculturist, who has made use of his head in the management of his lands, must be fully aware, however, that many crops produce much more beneficial results when turned in green. This, indeed, is the fact in reference to buckwheat, clover, and the culmiferous class of plants generally. The first-named article, if permitted to stand till the grain becomes fully ripe, and the haulm dry, will be diminished four fifths in bulk, and, I doubt not, nearly as much in value for all possible purposes of vegetable enrichment; and this supposition appears, indeed, to be fully sustained and demonstrated by the experience of practical farmers every where.

The efficacy of silicates, in producing fertility, is thus lucidly explained by the author above quoted: —

"The power of fertility which exists in the silicates of the soil is unlimited. An improved agriculture must depend on the skill with which this power is brought into action. It can be done only by the conjunction of salts, geine, and plants. Barren sands are worthless; a peat bog is little better; but a practical illustration of the principles which have been maintained, is afforded by every sandy knoll made fertile by spreading swamp muck upon it. This is giving geine to silicates. The very act of exposure of this swamp muck has caused an evolution of carbonic acid gas; that decomposes the silicates of potash in the sand; that potash converts the insoluble into soluble manure; and lo! a crop. That growing crop adds its power to the geine. If all the long series of experiments after Von Voght, in Germany, are to be believed, confirmed as they are by repeated experiments by our own agriculturists, it is not to be doubted that every inch of sand knoll, on every farm, may be changed into a soil, in thirteen years, of half that number of inches of good mould."

By turning in, occasionally, a green crop of either of the vegetables above named, the soil will be so much invigorated as to render the cultivation of it much more profitable for some years; and as crops for this purpose can be selected which, by their quick growth, obviate the necessity of a fallow, the cost of ameliorating the land is comparatively slight; indeed, so slight, under most circumstances, as to be scarcely worthy of being taken into account.

A PRACTICAL FARMER.

Bald Eagle Farm, *June* 8, 1849.

— *Germantown Telegraph.*

MOSSES ON MEADOWS.

Mosses on meadows, like vermin on cattle, are a consequence rather than a cause of evil. They indicate a deficiency of stamina, health, or condition in

the field or animal, rather than induce it themselves. But where either exist, they show something radically deficient, which must first be remedied before any useful results can follow. A farmer might as well leave his money with sharpers, or his manure heap under a spout, as his meadows in moss, or his cattle covered with vermin. All are spendthrifts together; and, if left to themselves, will, like Pharaoh's lean kine, soon consume his evidences of previous plenty, and show no equivalents in return. But how are we to get rid of mosses in meadows? Let us see how they get there. The surest way to get rich, is first to know how you become poor.

Mosses are generally the result of a feeble growth of the grasses on a moist surface. The moisture of the land is not of itself objectionable, but decidedly the reverse; but when the profitable occupants of the soil fail or become thin and meagre, the profitless are ever ready to come in and supply their places. This is the case with the mosses; and it is not till the cultivated plants have declined, that these have gathered strength. To remove the latter, the former should be put in the very best condition. Scarifying, harrowing, closely feeding, and treading them thoroughly by the sharp hoofs of sheep and cattle, are all useful in extirpating the mosses from meadows. Sowing strong quick lime over them, when recently mown, or after short cropping by animals, is attended with decided advantage. Ashes will sometimes produce a similar effect. Guano, when mixed with mould and sown broadcast, is exceedingly useful; and so, too, are compost manures of all kinds. These help to destroy the mosses by invigorating the grasses. Properly draining, and especially thorough under-draining the lands, is one of the most efficient modes of removing mosses and worthless aquatic plants. By carrying off all surplus, and particularly stagnant waters, the atmosphere and heat penetrate the soil, and induce a vigorous, healthy growth of the cultivated plants, and thereby withdraw so much of the space and food which otherwise would be monopolized by the intruders.

When these and some other of the most obvious means of renovating meadows fail, there is no alternative but to break up the sod, and subject the field to another course of cultivation. It is not absolutely necessary that this undergo a series of rotations, although for many reasons this is better; yet a rotation may be secured exclusively with the forage plants, the clovers, and numerous varieties of the grasses. The meadow may, if it be preferred, be thoroughly manured with unfermented dung, then turned over flat, and after applying a top-dressing of compost, may be harrowed lengthwise of the furrows, and sown with grass seed liberally; and if all has been properly managed, the mosses will not for years again infest your meadows. — *American Agriculturist.*

SUGGESTIONS FOR FARMERS.

THE STUDY OF NATURE RECOMMENDED.

Much has been said and written within the last few years on the importance of the study of natural science to the farmer; still, we think that the subject is so important that there is little danger of too much being said. The study of natural history has received so little attention in the United States, that very few farmers have a familiar knowledge of chemistry, geology, mineralogy, and botany, not to mention entomology, which may be said to be in its infancy in this country, a large portion of our insects yet remaining unknown and undescribed. Let the votary of natural science travel to collect specimens, and he will often be questioned respecting the use of his specimens. If he gathers plants, the general impression will be, that they are for medicine. He will rarely meet with any one who knows the utility of a cabinet or an herbarium, almost every body supposing that they are to be converted into money in some way; yet to what practical use many of the specimens can be applied, they cannot tell.

It is an old saying, that "knowledge is power;" and this maxim is most strikingly verified in the pursuit of farming; so much so that individuals, farming in the same neighborhood, with farms of an equal natural fertility, meet with widely different results. The one has large profits on his capital invested, and the other, perhaps, sinks money, or with difficulty raises sufficient to defray all expenses and support his family. The one obeys nature and her laws, and the other manages without system and contrary to nature. It may be said that many farmers make money, and are highly successful, with little or no knowledge of natural science. Granted; yet it must be admitted that they had derived benefit from the example of others, who were acquainted with natural science, or they have more or less followed the instructions of men who, by experiment and observation, have attained at least a partial knowledge of the laws of nature. Besides, if we examine closely, we shall find that most of our very rich ignorant farmers have acquired money by great industry and economy, carrying the latter virtue to so great an extent as to deny themselves and their families many of the comforts and conveniences of life. All will admit that a knowledge of chemistry, geology, and botany, embracing a knowledge of vegetable physiology, would be of great practical utility to the farmer. Were he a chemist, he could analyze the soil; and to do this, sufficient for all practical purposes, is within the capacity of all. By analyzing the soil, and knowing, in addition, the composition of the plant cultivated, the farmer knows what his soil needs, to grow that plant in its greatest perfection; or, in other words, he can feed the plant its proper food, and in suitable quantities. The farmer deals with nature. The greater portion of his life is spent amid the scenes of nature; hence, the more he understands nature, the better will he know how to manage her in her varied changes. The great improvements which have been made in agriculture during the last few years, are mainly owing to the application of science; and as yet we are but in the commencement of the improving era. Then it behoves us, as farmers, to study nature, and let the youth of our land, the future farmers of our country, be taught the study of nature. Then, by knowledge joined with experiment, industry, and economy, they will scarcely fail to enjoy a competence, besides having a greater opportunity of making new discoveries in agriculture and science, than the professor, whose life is spent in the laboratory or academic hall.

Notwithstanding the great assistance science affords in the acquisition of wealth, we think the greatest recommendation to its study is its power of affording happiness, which, after all, is the chief end and aim of every rational being. Our best and most permanent happiness is mental, or derived from the mind. All other enjoyments are shared by the brutes, in common with man. Hence it follows, that the highly-cultivated mind is capable of greater enjoyment than that which is uncultivated, because the cultivated mind has a greater variety of food to satisfy its desires. We say its capacity for happiness is the greatest; not that, in every instance, the cultivated mind is always the happiest. We think the cultivated mind, versed in natural science, is the happiest of all, because the study of nature is more congenial to the mind in its natural state than any other. Most of us recur with pleasure to the period of our childhood, when we roamed in the woods and fields, gathering flowers and hunting birds' nests, or chased butterflies, and played in the brooks. Then

was the time that all nature looked smiling, and then was the time to have instilled into our breasts a love of nature, by instructing us in the first principles of natural science. We have been told that Mr. Barnes, whose name is identified with the conchology of this country, many years ago had charge of a public school in the city of New York, and was highly successful in managing and improving his boys, besides implanting in their bosoms a strong love of nature, without interfering with their other studies. He encouraged the boys to gather curious stones, pebbles, shells, &c., during the time of intermission, and bring them to him. He would then name them, and talk about them, returning to each boy his own specimen; and the boys began to form cabinets for themselves. The effect was, it kept the boys out of mischief, besides affording them useful knowledge. Many of the boys of that school preferred gathering specimens of natural history to play, and several of them afterwards became distinguished naturalists. But the present system of common school education tends to deaden, instead of strengthening, a love of nature in children. Even in our higher schools and colleges, the study of natural science is considered of secondary importance, and there, if taught, it is generally done very superficially; however, a brighter day begins to dawn, and its importance is seen and felt by many.

A great proof of the power of the study of natural history to afford happiness, is the health-giving principle. It leads its votaries to spend much time in the open air, amid the glorious scenes of creation, where their minds are agreeably entertained by the surrounding objects, whose order and beautiful adaptation of means to ends excite both admiration and wonder. That the state of the mind has a great influence upon the body, is well known to all. Its power to restore to health dyspeptic and consumptive persons is magical. We know of several distinguished naturalists, who think that they are indebted to their love of nature for their health and life. At one time, the state of our health was such, that our friends supposed we would not live long, and we almost despaired of life. Away from home, in the university at Middletown, Ct., we began the study of mineralogy, and the formation of a cabinet. With congenial spirits, we roamed over the glorious hills of New England, examined her quarries, mines, and stone fences, in search of specimens. We had happy times. Our health was restored.

A great recommendation to the study of nature, and one which should induce parents to have their children so instructed, is, that it is a great preventive of vice and dissipation, because the mind of the naturalist is never at loss for employment, for suitable food. Let him be where he may, the great book of nature is ever open, inviting his study and attention, always presenting something new or wonderful. The order and variety which nature displays, is one great cause of the study of natural history being so fascinating, since the love of variety is deeply implanted in the human heart. The mind of the student of nature is never at a loss for company, for good society. He has no need of resorting to the tavern, the grog-shop, or gambling-house, to pass away the time. Let farmers' sons be well educated, especially in the different branches of natural history; then they would not become dissatisfied with their vocation, as it sometimes happens, but they would prefer it to every other. Supposing that a farmer knows the correct name of every plant, with its properties, that grows on his farm, the composition of its soil, its minerals, and rocks; would not such knowledge add greatly to his happiness? Then he would do his work understandingly, and his daily walks in the fields would be enlivened by familiar acquaintances. Not a flower, or plant, or pebble, would escape his notice; indeed, there is nothing which tends more than the study of nature to increase the powers of observation. The naturalist sees beauties unseen by others; tastes pleasures unknown and unfelt to others. "He sees wisdom in the trees, books in the running brooks, sermons in stones, and good in every thing." He does not become tired and disgusted with life, and find fault with the world and the order of Providence; but the more he studies, the more he discovers wisdom, design, and goodness in the arrangement of things, and a unity of design in that arrangement, proclaiming that its Author is one and the same, possessing all knowledge and power. It has often been said that a country life is the happiest, and poets have often sung its praises; for this the citizen pants while toiling to amass a fortune; and yet such a one, after having accomplished his wishes, and purchased a seat in the country, is often doomed to disappointment, simply for the reason that such a life is different from his former habits, which have become to him a second nature; besides, he is ignorant of natural history, and a country life soon loses its charms, and he longs to return to his former busy avocation. Had such a one a knowledge of and taste for nature, how happily could he pass his life amid the varied scenes of a country life!

S. B. BUCKLEY.

West Dresden, Yates Co., N. Y., *Dec.*, 1848.
— *Lancaster (Pa.) Farmer.*

DISEASES IN HORSES.

Broken Wind. — Broken wind is a disease with which horses are affected. The air-cells of the lungs become ruptured, from various causes, and respiration is labored and irregular. "The cure of a broken-winded horse," says Youatt, "no one ever witnessed, yet much may be done by way of palliation. The food of the animal should consist of much nutriment condensed into a small compass; the quantity of oats should be increased and that of hay diminished; the bowels should be gently relaxed by the frequent use of mashes; the water should be given sparingly through the day, although at night the thirst of the animal should be fully satisfied; and exercise should never be taken when the stomach is full. It will scarcely be believed how much relief these simple measures will afford the broken-winded horse, and of how much exertion he may be gradually rendered capable. Carrots are very useful to the broken-winded horse, not only as maintaining much nutriment and considerable moisture, so that less water may be required, but from some property they possess rendering them useful in every chest affection. A broken-winded horse turned out to grass, will never improve, on account of the almost constant distention of the stomach."

Worms. — It is to be presumed that the horse is troubled with worms when he has frequent attacks of colic, when he loses his appetite and strength, without any apparent cause. He should take bitter infusions, as wormwood, or tansy, and infusions of Carolina pink. Another excellent vermifuge is soot from a chimney where wood is burnt, given in doses of three or four ounces, mixed with warm milk.

Wens. — Tumors at first soft and indolent, which grow under the skin, and which have a tendency to become hard, and increase in size indefinitely, — the only sure method is to cut them out. This may be safely done, care being taken not to wound a blood vessel, or other important part. — *Selected.*

A bushel of wheat, weighing sixty-two pounds, contains 550,000 kernels.

THE HONEY-HEART CHERRY-TREE.

Fruit.

This variety is also called *Sparhawk's Honey*, and it was formerly called *Rogers's Pale Red*. The Honey Heart is doubtless a native variety, and it probably originated in this vicinity some sixty years ago. Mr. Samuel Hyde, an aged gentleman, of Newton, first saw it in that town, and he propagated it in his nursery, from the original tree, as he thinks.

It was called Rogers's Pale Red. His sons, and successors in the nursery business, Messrs. S. & G. Hyde, gave to this cherry the name *Honey Heart*, and under this appropriate appellation it has been extensively disseminated. As some authors called it *Sparhawk's Honey*, without sufficient authority, as we think, — for those who had first introduced had previously named it, — this name obtained considerably for a while, but of late its true name is becoming prevalent.

This tree is hardy, and luxuriant in growth, forming a beautiful, rounded, compact head, as may be seen by our engraving. The young wood is stout and vigorous, and the leaves are long and narrow, and of a fine dark green color. The tree is large and productive, and the fruit is unusually hardy against storms, which often destroy cherries very extensively, when they occur just before their ripening.

The fruit is of medial size; flattish-roundish, heart-shaped; skin very thin, glossy, bright amber and red, the red finely variegated with minute specks of yellow or amber; stem slender, and rather long; flesh yellowish, very tender, juicy, sweet, and delicious; the stone rather large. Rather late; ripening from the 1st to the 12th of July. This late season from the 12th to the 20th.

The Honey Heart is one of the very best of all cherries, particularly for the private garden. Some larger kinds, of inferior quality, may be more profitable for the market. But many intelligent horticulturists say that if they had but one cherry-tree for their own use, they would choose the Honey Heart; and we consider this opinion correct.

Cherry-trees have a great variety of forms. The Black Tartarean, Elkhorn, Richardson, and some others, run up in a high, narrow top. Others are spreading, and some are weeping. The Honey Heart is very handsome in form, and with its rich, luxuriant foliage, is very ornamental, to say nothing of its fine flowers and delicious and beautiful fruit. Our engraving, is from a large and very flourishing tree in the garden of Mr. H. K. Moore, Chelsea.

LONGEVITY OF THE HORSE.

It has long been an impression that the ordinary duration of a horse's life is much shorter than it ought to be, and that the excess of mortality is the result of carelessness or ignorant management. The great error consists in regard to the temperament and general constitution of a horse as altogether different from those of a human being; whereas they are precisely the same in all important respects. Disease arising from excessive fatigue, overheating, and exposure to air, want of exercise, improper diet, both as respects quality and quantity, and from many other causes, affects the horse and his master alike, and neglect in either case must terminate fatally. Indeed, when a man or a horse has acquired, by a course of training, a high degree of health and vigor, the skin of each is an infallible index of the fact. It has been often remarked in England, that the skin of the pugilist, who has undergone a severe course of training, when he prepares himself for the fight, exhibits a degree of beauty and exceeding fairness, that excites the admiration as well as the wonder of the spectator. So with the horse — his skin is the clearest evidence of the general state of his health. Even the common disease of foundering is not peculiar to the horse, but is merely a muscular affection, to which many men, who have overstrained themselves at any period, are subject. In fact, the medical treatment of the horse and his rider ought to be the same; and we confidently believe that if this principle were acted upon with a moderate share of attention and resolution, the average age of this useful animal would be much longer, and the profit derived from his labors proportionably greater. — *Norfolk Beacon.*

PLEASURES CONNECTED WITH THE PURSUIT OF SCIENCE.

There is no station in life, however lowly, but has its sweets, and there is no station in life, however high, but has its sorrows. In no instance can sorrow be traced to the pursuit of science. Whatever pleasure it may bring, one thing is certainly true, — it brings no sorrows. On the contrary, it is a source of enjoyment to every man who has a taste to pursue it, be that man an humble tradesman or a wealthy merchant. It is a common opinion that no man is scientific unless he is master of all the abstract knowledge relating to astronomy, mathematics, chemistry, geology, and is somewhat versed in Latin and Greek. But where can we find a man so thoroughly endowed with scientific knowledge? There are men who have a partial knowledge of these sciences, and we are among the number of those who do not believe in the old adage, "A little knowledge does more harm than good." That man is scientific who is master of his trade, understands all its principles and practices, or is master of his profession, be it teacher of languages or mathematics. So much for practical scientific attainments. And now what shall we say regarding more knowledge than merely comes within the scope of a man's business and profession? We have every thing to say that is favorable. The more knowledge a man possesses, he is more likely to be a better citizen and member of society. Ignorance degrades, knowledge elevates.

How much pleasure would a shoemaker derive from being acquainted with the principles of the steam engine, or the mysteries of chemistry! He could not turn to the right or to the left, in the course of a short walk, without having his mind attracted to something interesting and useful, and calculated to draw his mind from the drudgeries of his own occupation, which, we regret to say, often excites our sympathies as we believe shoemakers are not so well paid for their labor as they should be. And with regard to chemical science, it would teach many of them to labor in better ventilated apartments, than they in general do. How much pleasure would a tailor, or any other tradesman, enjoy, if he possessed some knowledge of geology: it makes no matter how little it may be at first, — it is of so attractive and pleasurable a nature, that "the little leaven would soon leaven the whole lump." If he takes a walk into the fields, he is delighted not only with the perspective beauties of nature, but with its wonders too. The mute rocks speak to him in a well-known tongue, and the pebbles by the river side chant to him the song of mountain rill and cataract. He may lift up a grain of the carburet of iron, and his mental eye sees it in the pencil of the artist, sketching the outlines of some immortal work of art. He may lift from beneath his feet a crystal of the magnetic oxide of iron, and his mental eye may figure it transformed into the pen of the statesman or author; or into the sword of the warrior, or the husbandman's ploughshare of peace. He may lift up a blackish-brown powder from beneath his feet, and to others it would be as an idle tale; but his mental eye can trace the chromate of iron adorning, in orange or gold colors, the turban of the Tartar or the scarf of the fair. Did space permit, we might here branch out into a most interesting and instructive field; but it is as well, perhaps, that we cannot do so at present, and we believe that it is far better to present objects to make others think, than to deal with subjects in such a manner as to prevent them from thinking. — *Selected.*

ON THE ORIGIN AND DIVERSITY OF SOILS.

BY PROFESSOR H. COULTAS.

If the origin of soils be considered with reference to the geological agents which have produced them, and the whole be then considered in connection with practical agriculture, the subject will be found to be very interesting and instructive. I purpose treating on these topics in this and subsequent articles.

The science of geology explains those natural agencies by which soils have been gradually and slowly produced, and which have effected their distribution in such diversity of character over the earth's surface. From a partial examination of the surface, we might suppose that the interior of the earth was all confusion and irregularity: sands and gravels, limestones and clays, are mingled together without any apparent order; and hence it is that such an opinion is actually entertained by many persons. The examination of these superficial accumulations of gravel, together with the vegetable soil generally resting on them, teaches us little concerning the true structure of the earth: on the contrary, this loose, superficial matter, and this grassy mantle covering the earth's surface, only tends to mask and conceal its real features from observation; and hence, to become acquainted with the structure of the interior, we must examine a spot where the crust of the earth has been broken, either by a natural or artificial cause, and presents what geologists call a natural or artificial section, as, for example, a sea-cliff, ravine, railway cutting, quarry, or coal mine: we shall then see that the crust of the earth is composed of a series of mineral masses piled one above the other, and observing a regular order of superposition.

It may be remarked here, that the examination of the superficial gravels has brought to light many facts in relation to the revolutions which the earth's surface has undergone. When examined scientifically, these gravels are found to consist chiefly of the decomposed substance of the under-lying rocks,

or those in the immediate neighborhood, which have been transported from the adjacent hills by superficial currents of water. It is common, however, to find fragments of rock which bear indubitable evidence of having come from a considerable distance, there being no rock like them in the neighborhood, or for many miles around. The fact is, that the superficial gravels constituting the diluvium and alluvium of the geologists, are composed of the wreck of strata of all ages, alluvial formations having occurred in all ages, the disintegration of rocks and the transportation of their loose material having taken place in every period since the surface of the earth was first divided into land and sea. Hence it is an easy matter to pick up, out of almost any collection of gravel, specimens of granite, porphyry, slate, sandstone, in short, of almost every kind of primary, transition, and secondary rock known to the geologist.

Now, although the layers, or strata, constituting the structure of the mineral masses which form the crust of the globe, have originally been deposited from water in the horizontal posture, as is evident from their identity in structure with modern strata formed by aqueous deposition of sediment at the mouths of rivers, or on the coasts left dry by the retreat of the sea, yet, nevertheless, owing to earthquakes which have taken place repeatedly, and at vast intervals of time, the greater part of them have been thrown out of the horizontal posture and dip, and strike into the earth at every angle of inclination from 0° to 90°. Hence it is that the edge of the beds emerge in succession from the bowels of the earth; and in travelling over a given district, we pass over the edges of the upturned beds, the soil varying with every new bed, and the amount of superficial area covered by any particular soil being in proportion to the thickness of the upturned bed out of which the soil has been formed.

The disturbance suffered by the strata, however disastrous to animal life at the time of its occurrence, has, nevertheless, been productive of much ultimate good. Had the strata continued in the horizontal posture, the same rock would have spread over a vast extent of country, and the soils of countries would have been the same. There would also have been a difficulty in obtaining valuable minerals, which can now be had with the greatest facility. Coal, for example, which lies at a considerable depth, could not have been obtained without boring through the upper series of strata. The surface of the earth would not have been diversified with its present grand and beautiful scenery, produced by mountain, hill, and valley; and that the admirable intermixture of mineral matter, which is so essential to the fertility of the soils, and the variety and progress of organic life on the globe, would never have taken place.

The whole subject of the formation of vegetable soils, and their distribution in such diversity of character over the face of the earth, is replete with the profoundest interest and instruction. Every earthquake which in by-gone time fractured and dislocated the solid strata, every flood which has swept over the ancient continent, every change of level which has elevated the bed of the ocean, or depressed the land beneath its surface, has contributed to bring about the present admirable intermixture of material — sand, clay, and lime, which now forms the earth's upper covering, — the fruit-bearing soil, the inexhaustible source of national prosperity and strength. — *Philadelphia Dollar Newspaper.*

SOAP SUDS.

This is a most valuable article, and should be strictly economized by every farmer who is desirous of increasing the fertility of his lands. Where no provision has been made to secure the advantages resulting from a systematic economization of this valuable liquid, by its conveyance to the compost heap, a large reservoir should be constructed, into which the suds may be conveyed daily, as fast as made, and from which it should be removed, every three or four days, to the fields, for purposes of irrigation. Grain and grass crops watered frequently with this valuable liquid exhibit surprising luxuriance, and are usually much more forward than crops of the same kind which are not so assisted. Some farmers have a low carriage, on which they place a hogshead, or old wine pipe, so fixed as to admit of the contents being let off in various directions over the soil as the carriage proceeds, and in a manner somewhat similar to that in which our watering machines disseminate their cooling contents in our streets during the heat of summer. These irrigating machines, though of unquestionable utility to the farmer, are yet of moderate expense: the carriage may be constructed by any laborer who can use an auger and handsaw, and as to the "tank," or reservoir, it may be either a wine pipe, molasses hogshead, or box. All that is necessary is to procure a vessel that is tight, and sufficiently strong to withstand the jolting of the carriage when driven rapidly over rough lands, when full. Of all the articles used for purposes of irrigation, this is unquestionably and without doubt the most valuable. It contains the food of plants in a state of ready and complete solution, and is consequently immediately available to the spongioles, on being applied to the medium or soil in which they grow. By watering garden beds with this liquid, we have found the ravages of bugs and aligerous insects of all kinds, as well as the depredations of slugs and worms, almost immediately arrested. The striped bug, so frequently found on vimineous vegetables, although it will not wholly forsake, will yet cease in a great measure to infest them, if copiously watered with suds. It is also highly beneficial to fruit trees. By washing the trunks of plum, cherry, peach, and apple-trees with fresh suds, many cutaneous diseases are speedily and permanently cured. In many instances, cases of inveterate barrenness, of long standing, have been remedied, and the trees rendered surprisingly healthy and prolific. — *Maine Cultivator.*

FLOATING BEE-HOUSES.

In Lower Egypt, where the flower harvest is not so early by several weeks as in the upper districts of that country, the practice of transportation is carried on to a considerable extent. About the end of October, the hives, after being collected together from the different villages, and conveyed up the Nile, marked and numbered by the individuals to whom they belong, are heaped pyramidically upon the boats prepared to receive them, which, floating down the river, and stopping at certain stages of their passage, remain there a longer or shorter time, according to the produce which is afforded by the surrounding country. After travelling three months in this manner, the bees having culled the perfumes of the orange flowers of the Said, the essence of roses of the Facium, the treasures of the Arabian jessamine, and a variety of flowers, are brought back, about the beginning of February, to the places from which they have been carried. The productiveness of the flowers at each respective stage is ascertained by the gradual descent of the boats in the water, and which is probably noted by a scale of measurement. This industry produces for the Egyptians delicious honey and abundance of beeswax. — *Dr. Bevan.*

Domestic Department.

Boiling Rice. — Many persons nearly spoil rice by boiling it too much, as it becomes gluey or clammy, sticking together like paste. Rice may be well cooked, and yet the grains remain entire, so that the same or any liquid will run through them; and thus cooked, it is far superior to that which is overdone, as is often, or we may say usually, the case; for not one in four are skilful in preparing this article. The following directions are worthy the attention of those not skilled in this piece of culinary art: —

Take one pint of rice, wash it, and put it in soak for two hours. Have ready two quarts of boiling water, with a little salt in it, in a stewpan. Half an hour before you wish to use it, pour the water, in which the rice is soaked, from it, and, with a tablespoon, shake the rice into the stewpan, without stirring it, and let it boil ten minutes; then strain the liquid from the rice. Return the rice to the stewpan, and let it steam for fifteen or twenty minutes, when it will be done, and the grains will be separate. Add a little butter, and send it to the table.

A Mother's Voice. — The editor of the Cincinnati Atlas concludes a notice of a visit to the Asylum for the Deaf and Dumb at Columbus, Ohio, by relating the following: —

Of one, an intelligent and modest young lady, who had become deaf from sickness when two years and a half old, we inquired whether she could recollect any thing of sounds or words. She answered that she could not. It occurred to us that there might have been at least one sound which might be remembered even from that tender age, and we ventured to inquire whether she had no recollection of her mother's voice. It will be long before we forget the sweet, peculiar smile which shone upon her features, as, by a quick inclination of her head, she answered, yes. What a world of thought and feeling clusters around such a fact! In all her memory there is but one sound, and that is her mother's voice. For years she has dwelt in a silence unbroken from without, but those gentle tones of love still linger in her heart. There they can never die; and if her life should be prolonged to threescore years and ten, o'er the long silent track of her life the memory of that voice will come, in loveliness and beauty, reviving the soul of weary old age with the fresh, lovely sounds of her cradle hours. — *Michigan Farmer.*

Cottage Potato Pudding. — Parboil and mash two pounds of potatoes; beat them up into a smooth batter, with about three quarters of a pint of milk, two ounces of moist sugar, and three beaten eggs. Bake it about three quarters of an hour. Three ounces of currants or raisins may be added. Leave out the milk, and add three ounces of butter. Bake in pattypans, with tart paste at the bottom, or add a little flour, and it will make a nice cake. — *Selected.*

Bread and Butter. — Perhaps it is not generally known that boiled potatoes, peeled while hot, and well mashed with a little new milk and fine salt, make a very good substitute for bread and butter.

Boys' Department.

Vulgarity. — We would guard the young against the use of every word that is not perfectly proper. Use no profane expressions — allude to no sentence that will put to blush the most sensitive. You know not the tendency of habitually using indecent and profane language. It may never be obliterated from your hearts. When you grow up, you will find at your tongue's end some expression that you would not use for any money. It was one you learned when you was quite young. By being careful, you will save yourself a deal of mortification and sorrow. Good men have been taken sick and become delirious. In these moments, they have used the most vile and indecent language imaginable. When informed of it, after a restoration to health, they had no idea of the pain they had given their friends, and stated that they had learned and repeated the expressions in childhood; and though years had passed since they had spoken a bad word, the early impressions had been indelibly stamped upon the heart. Think of this, ye who are tempted to use improper language, and never disgrace yourselves.

"It chills my blood to hear the blest Supreme
Rudely appealed to on each trifling theme:
Maintain your rank, vulgarity despise;
To swear is neither brave, polite, nor wise:
You would not swear upon a bed of death;
Reflect, your Maker now may stop your breath."

— *Literary Union.*

Learning not Education. — There is a great mistake about what is called *education* Some suppose a learned man is an educated man. No such thing. That man is educated who knows himself, and who takes accurate common-sense views of men and things around him. Some very learned men are the greatest fools in the world: the reason is, that they are not educated men. Learning is only the means, not the end: its value consists in giving the means of acquiring knowledge; the discipline which, when properly managed, it gives the mind. Some of the greatest men in the world were not overstocked with learning, but their actions proved that they were thoroughly educated.

Washington, Franklin, Sherman, were of this class; and similar, though less striking instances, may be found in all countries. To be educated, a man must learn to think, reason, compare, and decide accurately. He may study metaphysics till he is gray, and languages till he is a walking polyglot, and if he is nothing more, he is an uneducated man. There is no class in the country who have a stronger interest in the education of their children than farmers; and the subject should receive from them the attention it deserves. — *Literary Union.*

Books. — Books may be likened to a vast reservoir, and the reading of them to a conduit, which leads out a stream of knowledge to refresh and invigorate the mind. Reading, to him who is in search of knowledge, is a cloud by day and a pillar of fire by night, to guide him along an uncertain, dark, and rugged way. It gives a constant and vigorous impulse to the mind, and is as necessary to its healthful action as food is to the body. By means of reading, the treasures of history, the wonders of astronomy and chemistry, the beauties of poetry and eloquence, are opened to our view, to enrich our minds, to exalt and purify our hearts. The experience of ages is placed within our reach, and we have only to cultivate our memories to retain its treas-

ures. It is true, much of this advantage and improvement is predicated on the judicious selection of books. If this be neglected, they may be the instruments to minister to a diseased imagination and a depraved taste, and afford as little benefit to the reader as deadly poison would to him who used it instead of healthful aliment. — *Common School Advocate.*

Health.

Pure Water the best Drink. — There is no axiom of health more just than that "men never have a true appetite till they eat with relish any ordinary food." It is told of John Bailes, who lived to the age of one hundred and twenty-eight, that his food for the most part consisted of brown bread and cheese, and his drink water and milk. He had buried the town of Northampton twenty times over, excepting three or four; and it is said strong drink killed them all. Water manifestly is the natural beverage of all animals; whole nations, as the Mahometans and the Hindoos, use it alone as a beverage; and, unlike other drink, it will not sate the appetite, but the contrary; indeed, it was observed by Hypocrates, above two thousand years ago, that water-drinkers have generally keen appetites. It is a fluid that requires no digestion, for it is not necessary that it should undergo any changes; it is the natural menstruum that holds in solution both what is essential for the healthy functions of the body, and what has become a refuse, after serving its destined office and intention in the animal kingdom. Water, therefore, from its congenial qualities, can never much disturb the system; and when it does, it is speedily expelled by its natural outlets, the skin and kidneys. It is told of Lord Heathfield, so well known for his hardy habits of military discipline and watchfulness, that his food was vegetable and his drink water, never indulging himself in animal food or wine. And Sir John Sinclair, in his work on longevity, says, in his account of Mary Campbell, then aged one hundred and five, that she preferred pure water to any other drink. — *Selected.*

Expanding the Chest. — Those in wealthy circumstances, or who pursue sedentary employments within doors, generally use their lungs but very little, — breathe but very little air into the chest, and thus, independently of positions, contract a wretchedly narrow, small chest, and lay the foundation for the loss of health and beauty. All this can be perfectly obviated by a little attention to the manner of breathing. Recollect the lungs are like a bladder in their structure, and can be stretched open to double their ordinary size, with perfect safety, giving a noble chest, and perfect immunity from consumption. The agent, and the only agent required, is the common air we breathe, supposing, however, that no obstacle exist, external to the chest, such as lacing, or tying it around with stays, or tight dress, or having shoulders lay upon it. On rising from the bed in the morning, place yourself in an erect posture, your chest thrown back, and shoulders entirely off the chest; now inhale or suck in all the air you can, so as to fill the chest to the very bottom of it, so that no more air can be got in; now hold your breath, and throw your arms off behind, holding in your breath as long as possible. Repeat these long breaths as many times as you please. Done in a cold room is much better, because the air is much denser, and will act much more powerfully in expanding the chest. Exercising the chest in this manner, it will become very flexible and expansible, and will enlarge the capacity and size of the lungs. — *Common School Advocate.*

Exercise. — Exercise gives strength to every fibre, and energy to all the vital powers. But exercise, like most good practices and habits, may be carried to excess. Extreme toil not only shortens life, but brings less to pass than steady but moderate labor. It is not, therefore, often advisable for farmers to undertake to perform what are called "great days' works;" for one day of over-exertion may cause weeks of debility, if not months of sickness.

Mechanics' Department, Arts, &c.

New Process of Tanning. — The London Wesleyan Times speaks of a new process of tanning, recently patented by Dr. Turnbull, and successfully brought into operation by a company in Paris. The same principle, it appears, has been successfully worked by the London Leather Company, and a company has also been working under the same patent at Ivybridge, Devonshire. The most satisfactory testimony to the excellent quality of the article is borne by those who have constantly and for a very considerable period been wearing boots and shoes made of patent leather, and whose daily occupations subjected it to the severest test; and it was pronounced to be perfectly impervious to moisture, and decidedly the most serviceable as well as the most durable they had ever worn. It appears that the most important part of Dr. Turnbull's process is the dissolving and entirely extracting the lime from the skins by the use of sugar, and, at the same time, preserving the skins from the slightest amount of decomposition; whilst, by the old process, in the use of mastering pits, (made with the ordure of pigeons, dogs, &c.,) a considerable loss is the unavoidable result. The next is the complete tanning in a few days, thereby fully meeting the point so long sought for by the government prior to the removal of the duty on leather, in order that the large amount of capital necessarily locked up for so long a period should now be set at liberty, and for which purpose they had employed the most scientific men of the day, and at very considerable expense. This extraordinary and beautiful law of nature, the principle of endosmos and exosmos, was first discovered by Dutrochett, and afterwards applied to the arts by Dr. Turnbull, who made it applicable to the purpose of tanning by placing solutions of oak bark of unequal density within and without the skins and hides, and thereby combining nature and art in producing the most successful and valuable results. — *Farmer and Mechanic.*

Fire-Proof Wood. — The following recipe for attaining this object, emanates from a distinguished French chemist. Its efficiency can be easily tested.

"Doctor Fuehs, member of the Academy of Munich, has discovered a composition made of granulated earth and alkali. To obtain it, the inventor says, you must dissolve some moist gravelly earth, which has been previously well washed, and cleansed from any heterogeneous matter, in a solution of caustic alkali. This mixture has the property of not becoming decomposed by fire or water. When spread upon wood, it forms a vitreous coat, and is proof against the two elements. The building committee of the Royal Theatre have twice publicly tried the composition on two small buildings; the one which

was not covered with the composition was consumed, while the other remained perfect and entire. The cost of this process is very insignificant compared with its great utility, being about two francs three centimes per hundred square feet. The Royal Theatre at Munich, has undergone this process, having about four hundred thousand square feet; the expense of which was about four or five thousand francs. — *Pennsylvania Cultivator.*

THE INFLUENCE OF THE MOON UPON THE WEATHER.

There is no more extensively known and universally believed superstition, than that the changes of the moon have some effect upon the weather. The classic student finds traces of this belief in very early times; and years and observation seem rather to have confirmed than to have shaken men's faith. Virgil, in his beautiful songs for the husbandmen, written before Christ was upon earth, thus gives the signs of the new moon: —

"If when the moon renews her refluent beam,
Through the dark air her horns obscurely gleam,
Along the wasted earth and stormy main
In torrents drives the congregated rain:
But if (unerring sign) the orb of night,
Clear, wheel through heaven her forth increasing light,
Rain, nor rude blast shall vex that hallowed day
And thus the month shall glide serene away."

Another Latin writer, even earlier than Virgil, says that "if the new moon have its upper horn darkened, the last half of the month will be rainy. But if the lower horn be darkened, the first half of the month will be rainy; while if the middle be darkened, the middle of the month will be rainy."

In our day the popular maxim seems to be that we may look for a change of weather at every change of moon.

It appears that there must be something to distinguish this from most other signs, or like them it would have its day and be forgotten. It becomes one, before he rejects it as altogether unworthy his notice, to account for its having taken such strong hold upon men's faith. We hear men every few days uttering their grave predictions concerning the weather; and, if you question their signs, they solemnly assure us that many years' observation goes further with them, than all our scientific scepticism.

And there have been individuals, who, during the greater part of their lives, have compared the changes of the moon and weather. Toaldo, of Padua, made these observations for forty-five years. Every change of the weather occurring within three days, either before or after a change of the moon, he attributed to that change; and that is about the time generally claimed. He gives us, as the result of these tedious calculations, that out of every seven new moons, six were attended with change of weather; out of every six full moons, five were attended with change; and out of every three quarter moons, two were attended with change.

Others have made similar observations, and have arrived at similar conclusions. Do we discover any principle here? Or how shall these remarkable coincidences be accounted for? Let us see. From the time of new moon till the time of new moon again, is just about one month. During that time it goes through its four changes. This makes its changes occur at about a week's interval. Now, allowing three days before and three days after each change to be influenced by that change, and it will leave but one day in the week independent!

Need we wonder, then, that out of seven new moons six were attended with rain? A much greater wonder to me is, that sixty-nine out of seventy were not thus attended.

In reading the faithful observations of these patient men, I am sometimes reminded of the anecdotes travellers tell of the North American Indians. Sometimes they suffer severely from drought; and after having tried sacrifice and self-torture in vain, they resort to one expedient, which they say has never failed to be followed by immediate rain. Spurn not to be taught by a son of the forest. The ceremony is simple; any one can try it at his will; and my word for it, it will rain the minute he is through.

One of the chiefs gets upon some high hill, or upon the roof of a hut, and commences shaking his fists at the clouds, shooting his arrows in the sky, and defying the storm-god to afflict them longer. When he gets tired another takes his place, and so they keep it up, day after day, week after week, and month after month; and, what is most mysterious — perfectly inscrutable — is, it always brings the rain! The clouds have to yield. The storm-god gives over the battle.

Should we see such a performance going on in one of our towns, we should pronounce it ridiculous. But I am at a loss to know how much less ridiculous to consider it, when I see a person step up to the corner on a rainy day, take down the almanac, and very sagely remark, "Ah! I see what made it rain to-day. The moon changed three days ago," or else "will change in three days," as the case may be; and that, too, when one minute's thought would teach them, that not one hour of their lives is removed by four days from some one of the moon's changes. — *Wright's Paper.*

ON THE PRACTICAL USE OF LEAVES.

There are two facts in the functions of the leaf which are worth consideration on account of their practical bearings. The food of plants is, for the most part, taken in solution through its roots. Various minerals — silex, lime, alumina, magnesia, potash — are passed into the tree in a dissolved state. The sap passes to the leaf, the superfluous water is given off, but not the substances which it held in solution. These, in part, are distributed through the plant, and, in part, remain as a deposit in the cells of the leaf. Gradually the leaf chokes up, its functions are impeded, and finally entirely stopped. When the leaf drops it contains a large per cent. of mineral matter. An autumnal or old leaf yields, upon analysis, a very much larger proportion of earthy matter than a vernal leaf, which, being yet young, has not received within its cells any considerable deposit. It will be found, also, that the leaves contain a very much higher per cent. of mineral matter than the wood of the trunk. The dried leaves of the elm contain more than eleven per cent. of ashes, (earthy matter,) while the wood contains less than two per cent.; those of the willow more than eight per cent., while the wood was only 0.45; those of the beech 6.69, the wood only 0.36; those of the (European) oak 4.05, the wood only 0.21; those of the pitch pine 3.15, the wood only 0.25 per cent.*

It is very plain, from these facts, that, in forests, the mineral ingredients of the soil perform a sort of circulation; entering the root, they are deposited in the leaf; then, with its fall to the earth, and by its decay, they are restored to the soil, again to travel their circuit. Forest soils, therefore, instead of being impoverished by the growth of trees, receive back annually the greatest proportion of those mineral elements necessary to the tree, and, besides, much organized matter received into the plant from the atmosphere; soils therefore are gaining instead of

* See Dr. Gray's Botanic Text Book — an admirable work, which every horticulturist should own and study.

losing. If the owner of parks or groves, for neatness' sake, or to obtain leaves for other purposes, gathers the annual harvest of leaves, he will in time take away great quantities of mineral matter, by which the soil ultimately will be impoverished, unless it is restored by manures.

Leaf manure has always been held in high esteem by gardeners. But many regard it as a purely vegetable substance; whereas, it is the best mineral manure that can be applied to the soil. What are called vegetable loams, (not peat soils, made up principally of decomposed roots,) contain large quantities of earthy matter, being mineral-vegetable rather than vegetable soils.

Every gardener should know that the best manure for any plant is the decomposed leaves and substance of its own species. This fact will suggest the proper course with reference to the leaves, tops vines, haulm, and other vegetable refuse of the garden.

The other fact connected with the leaf, is its function of exhalation. The greatest proportion of crude sap which ascends the trunk, upon reaching the leaf, is given forth again to the atmosphere by means of a particularly beautiful economy. The quantity of moisture produced by a plant is hardly dreamed of by those who have not specially informed themselves. The experiments of Hales have been often quoted. A sunflower, three and a half feet high, presenting a surface of 5.616 square inches exposed to the sun, was found to perspire at the rate of twenty to thirty ounces avoirdupois every twelve hours, or seven times more than a man. A vine, with twelve square feet, exhaled at the rate of five or six ounces a day. A seedling apple-tree, with twelve square feet of foliage, lost nine ounces a day.*

These are experiments upon very small plants. The vast amount of surface presented by a large tree must give off immense quantities of moisture. The practical bearings of this fact of vegetable exhalation are not a few. Wet forest lands, by being cleared of timber, become dry, and streams fed from such sources become almost extinct as civilization encroaches on wild woods. The excessive dampness of crowded gardens is not singular, and still less is it strange that dwellings covered with vines, whose windows are choked with shrubs, and whose roof is overhung with branches of trees, should be intolerably damp; and when the good housewife is scrubbing, scouring, and brushing, and, nevertheless, marvelling that her house is so infested with mould, she hardly suspects that her troubles would be more easily removed by the axe or saw than by all her cloths and brushes. A house should never be closely surrounded with shrubs. A free circulation of air should be maintained all about it, and shade trees so disposed as to leave large openings for the light and sun to enter. The unusual rains of the current season have produced so great a dampness in our residences that no one can fail to have noticed its effect, both on the health of the occupants and upon the beauty and good condition of their household substance.

HENRY W. BEECHER.

— *Western Farmer and Gardener.*

* Lindley's Horticulture, p. 42 and 44. Gray's Botany, p. 131.

THE GREATNESS OF MAN.

Mankind, viewed collectively, as an assemblage of beings, presents to contemplation an object of astonishing magnitude. It has spread over this wide world, to essay its powers against every obstacle, and every element; and to plant in every region its virtues and its vices. As we pass along the plains, we perceive them marked by the labors, the paths, or the habitations of man. Proceeding forward across rivers, or through woods, or over mountains, we still find man in possession on the other side. Each valley that opens, and each hill that rises before us, presents a repetition of human abodes, contrivances, and appropriations; for each house, and garden, and field, (in some places almost each tree,) reminds us that there is a person somewhere who is proud to think and say, "This is mine."

All the beautiful and rugged varieties of earth, from the regions of snow to those of the burning sand, have been pervaded by man. If we sail to countries beyond the seas, we find him still, though he may disclaim our language, our manners, and our color. And if we discover lands where he is not, we presently quit them, as if the Creator, too, were a stranger there. Here and there, indeed, a desert retreat is inhabited by an ascetic, whom the solemnity of solitude has drawn thither; or by a felon, whom guilt has driven thither.

While he extends himself thus over the world, behold his collective grandeur. It appears prominent in great cities, built up by his own hands; it is seen in structures that look like temples erected to time, which promise by their strength to await the latest years of his continuance with men; and seem to plead by their magnificence against the decree which dooms them to perish when he shall abandon them; it is seen in wide empires, and in armies, which may be called the talons of imperial power — to give security to happiness where that power is just, but for cruel ravage where it is tyrannical; it is displayed in fleets; in engines, which operate as if informed with a portion of the actuating power of his own mind; in the various productions of beauty, the discoveries of science, in subjected elements, and a cultivated globe. The sentiment with which we contemplate this scene is greatly augmented when imagination bears her flaming torch into the enormous shade which overspreads the past, and passes over the whole succession of human existence, with all its attendant prodigies. When we have made the addition for futurity, of supposing the human race extensively enlightened, and apprized of their dignity and power, and combined in a far stricter union, till the vast ocean of mind prevail over all its accustomed boundaries, and sweep away many of the evils which oppress the world — we may pause a while and indulge our amazement. Such an aggregate view of the multitude, achievements, and powers of man, is grand. It has the air of a general and endless triumph. — *Life and Thoughts of John Foster.*

CHINESE HEMP.

French agriculture has recently been enriched by a very important new production. This precious article is the Chinese hemp, the *La ma cor chorus*, the seeds of which were imported into France by M. Stier, a member of the French embassy in China, and has been cultivated and naturalized at Marseilles by M. Garnier Savatier. This hemp, the reproduction of which is now secured by the seeds, which have ripened in the best possible manner, grows to a height of twenty-four to twenty-five feet; the stalk is from five to six inches in circumference; each plant produces from two to three kilograms of seed, and furnishes thread enough to make a yard of superb lawn, superior in beauty and quality to any obtained from French materials. The cultivation of this plant in the south of France will be the more precious to the country, as a climate of the temperature of that region is necessary for its fructification, and its seeds will find a ready sale in other countries where the seeds will not ripen, but where the filaments may be produced. The South will

thus have a double advantage. Some specimens of this plant were exhibited at the Agricultural Show at Montpelier. The height of it was from twenty to twenty-two feet. — *Farmer and Mechanic.*

MORTALITY AMONG THE HORSES.

Mr. P.: The sake of humanity prompts me to send you the following observations. Over a dozen of horses died last week in our streets from what is generally termed *sun-strike.* The fact is, that the inhuman owners or drivers expect their horses to go as far and as fast at this, as at other seasons of the year. The spirit of the noble animal will not permit him to give up until he is exhausted; the heat is no doubt the cause, but how erroneous is the treatment to restore them! The first thing is, to plunge a knife into the palate of the mouth or the partition of the nostrils. Here is a double error: they imagine by that means they deprive the brain of blood! No such thing; in the palate, he mostly draws arterial blood which is going to the parts for support; in the nose, they only abstract the venous blood of the face. The great error is, they aggravate the disease by "taking away even that which is left."

The proper and simple means under such circumstances, (and which every coachman and stage-driver ought to be made acquainted with,) would be, to get a little gin or brandy, and add double the quantity of water to it, and give a spoonful every five minutes, until reaction takes place, when the animal will be, in nine cases out of ten, restored and able to walk to his stable in less than an hour. By pursuing the other course, nine cases out of ten die, and, for the information of parties that advocate the bleeding, I must tell them, that if ever it should be deemed necessary to deprive the brain of blood, they must tie up the carotid or vertebral arteries; and the only channels conveying blood from the brain are the jugular veins.

CHARLES WILLIS, *Veterinary Surgeon.*
— *N. Y. Spirit of the Times.*

Tall Grass. — Mr. Nathan Pendergrass, of Randolph, has left at our office a specimen of herdsgrass, six feet and six inches long, from seed sowed last November, which barely came out of the ground before cold weather. Last winter was a season of regular cold weather. In winters of very changeable weather, grass that has just started late in fall, is very liable to be winterkilled.

The Drought is very severe (July 30) in most parts of New England, particularly in Maine and in the middle and northern parts of New Hampshire and Vermont. It is quite severe here, but less so than it is a considerable distance east and north. In this region the crop of hay is middling. In sections where the drought is most severe, there will be about half as much hay as there was last year.

Ohio State Fair, which was intended to be held at Cincinnati, early in September, is postponed till next year on account of the prevalence of the cholera in that city.

A Horse killed by Bees. — In Chillicothe, Ohio, a horse was feeding quietly, when bees suddenly sallied forth from their hives, in an adjoining lot, and assailed him at every point, and the poor beast died in less than three hours.

OLD FRIENDS TOGETHER.

BY CHARLES SWAIN, ESQ.

O, time is sweet when roses meet,
With spring's sweet breath around them;
And sweet the cost, when hearts are lost,
If those we love have found them;
And sweet the mind that still can find
A star in darkest weather;
But nought can be so sweet to see,
As old friends met together!

Those days of old, when youth was bold,
And time stole wings to speed it,
And youth ne'er knew how fast time flew,
Or, knowing, did not heed it!
Though gray each brow that meets us now, —
For age brings wintry weather, —
Yet nought can be so sweet to see,
As those old friends together!

The few long known, whom years have shown,
With hearts that friendship blesses;
A hand to cheer, perchance a tear,
To soothe a friend's distresses;
Who helped and tried, still side by side,
A friend to face hard weather;
O, thus may we yet joy to see,
And meet old friends together.

THE OLIO.

"Hear, Hear!" — The celebrated Richard Brinsley Sheridan was very much annoyed on one occasion, in the House of Commons, by a member continually interrupting him by shouting, "Hear, hear!" In course of the debate, Sheridan took occasion to allude to a political contemporary, whom he described as one who wished to play the rogue, but only had sense enough to play the fool. "Where," exclaimed Sheridan, — placing great emphasis on the word *where,* — "shall we find a more foolish knave, or a more knavish fool, than this?" "*Hear, hear,*" was instantly bellowed by the member in question. Sheridan instantly turned round, and bowed to the gentleman, thanking him for his prompt reply to his question, and sat down amid convulsions of laughter from all but the unfortunate member.

An Eye to Business. — A temperance lecturer in England, a short time ago, finished his discourse thus: "And, finally, my hearers, why should any of you drink ardent spirits? My son Thomas, just round the corner, has got as good root beer as any in the country, at only sixpence a quart."

"I was charmed," says Lord Oxford, "with the answer of a poor man in Bedlam, who was insulted by an apprentice, because he would not tell him *why* he was confined. The unhappy creature at last said, 'Because God Almighty deprived me of a blessing which you never had.'"

TERMS. — The New England Farmer is published every other Saturday, making a neat and handsome volume, at the close of the year, of 416 pages, at $1 a year, or five copies for $4, payable in advance. It may be neatly bound at 18¾ cents, or elegantly bound in muslin, embossed and gilt, at 25 cents a volume. As it is stereotyped, back numbers can be furnished to new subscribers.

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